

## DISCUSSION

### Priority designation

The Applicant has updated the priority designation paragraph to reflect the current status of the related applications.

### Rejections under § 112

Claims 1 and 13 have been amended to clarify that the material associated with the array / arrayed information structure emits data indicative of the biological indicator. Claims 1 and 13 have also been amended to clarify that the preconditioning is used to facilitate the subsequent interferometric interactions.

Claim 14 has been clarified by including the term "and" where indicated by the Examiner.

### Rejection under § 101

Claim 5 has been amended to cover clarify that the computer program code is embodied on a computer readable media to overcome this rejection.

### Rejections under § 102

The Examiner has rejected the claims based on U.S. Pat. No. 5,871,462 to Garini et al. The passages cited therein relate to a related prior art technique as embodied in U.S. Pat. No. 5,539,517. With this arrangement, incident light is collected from a scene of interest. This light is passed through an interferometer that outputs modulated light corresponding to a predetermined set of linear combinations of the spectral intensity of the light emitted from each pixel of the sample. The light outputted from the interferometer is output on a detector array. The output of the detector array is then processed to determine the

spectral intensity of each pixel. With this arrangement, the light emitted from the scene is passed through the interferometer which manipulates the light. In contrast, the current invention, as claimed, provides for a technique wherein the digitized output pattern which is, in essence, a series of bits, is interferometrically enhanced. This arrangement allows for a much more efficient and cost-effective technique for analyzing obtained data. In addition, with the invention, as claimed, previously generated output patterns may be retrospectively analyzed -- wherein Garini requires a direct manipulation of the light emitted from the scene. Therefore, the claims are novel and non-obvious over Garini.

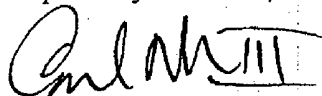
With regard to the term tessellation, Garini does not disclose segmenting the diselose tessellation, but rather describes the interferometric analysis of light emitted from various portions of the scene. Such a piece-by-piece analysis to generate a larger image is not the equivalent to segmenting or tessellating a digitized output pattern (which as already been assembled / generated from the scene).

Claims 3 has been amended to modify it from covering an "intended use" to a function of the mapping unit. The supporting passage cited within Garini does not disclose a system whereby a measurement is taken and it is compared to a reference curve, such as a diffusion curve, but rather discusses the differentiation between different probe species. Therefore, the claims (e.g., 2 to 5) are also novel and inventive over this aspect of Garini.

**CONCLUSION**

As Garini does not pertain or suggest the signal processing techniques of the current invention with regard to a digitized output pattern, the claims as submitted are novel and non-obvious. Therefore, Applicant believes that the claims as amended put the application in condition for allowance. The Examiner is kindly requested to contact the undersigned if there are any matters which may be addressed telephonically or via e-mail.

Respectfully submitted,

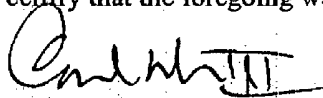


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June 23, 2004

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I certify that the foregoing was sent by facsimile on the date above to 703.872.9306.



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